



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,833	03/18/2004	Sang-Min Lee	678-1176	6461

66547 7590 11/15/2007
THE FARRELL LAW FIRM, P.C.
333 EARLE OVINGTON BOULEVARD
SUITE 701
UNIONDALE, NY 11553

EXAMINER

KHAN, USMAN A

ART UNIT	PAPER NUMBER
----------	--------------

2622

MAIL DATE	DELIVERY MODE
-----------	---------------

11/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/803,833

Applicant(s)

LEE, SANG-MIN

Examiner

Usman Khan

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2007.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9, 11 and 13-18 is/are rejected.
7) ☒ Claim(s) 10 and 12 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

Response to Arguments

Applicant's arguments filed on 08/20/2007 with respect to claims 1 - 18 have been considered but are moot in view of the new ground(s) of rejection.

Regarding objection to specification provided in the previous office action for failing to provide a descriptive title. Applicant has amended the title of the invention to overcome the objection to the specification.

Regarding **claims 1 and 14**, response to applicant's argument that in claims 1 and 14, Kang fails to teach:

a camera lens unit in a portable wireless terminal including a main body and a folder rotatable about a first axis with respect to the main body, the camera lens unit comprising a camera lens rotating about a hinge axis aligned with the first axis. The camera lens is engaged with a hinge dummy by way of a camera holder, and then is rotated.

Park et al. fails to teach:

a camera lens unit in a portable wireless terminal including a main body and a folder, the folder having a center hinge arm with an opening, the camera unit comprising a camera lens disposed in the opening.

In response Kang teaches a camera lens unit in a portable wireless terminal including a main body and a folder rotatable about a first axis with respect to the main

Art Unit: 2622

body, the camera lens unit comprising a camera lens rotating about a hinge axis aligned with the first axis (Abstract and column 2 lines 14 *et seq.*). The camera lens is engaged with a hinge dummy by way of a camera holder, and then is rotated (figures 4 items 32 and 26a).

In response Park et al. teaches a camera lens unit in a portable wireless terminal including a main body and a folder, the folder having a center hinge arm with an opening, the camera unit comprising a camera lens disposed in the opening (figures 1 - 4 item 102 center hinge arm with an opening to the left and being positioned between the side hinge arms also item and 201).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4 – 9, 14 – 16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kang (US patent No 7,133,691).

Regarding 1, Kang teaches a camera lens unit in a portable wireless terminal (figure 4) including a main body (figure 4 item 20 [Note: even though in Kang item 10 is called the main body the examiner believes that the claim of the pending application is

Art Unit: 2622

structured as such item 20 can be considered as the main body)) and a folder rotatable about a first axis with respect to the main body (figure 4 item 10 [Note: even though in Kang item 20 is called the folder the examiner believes that the claim of the pending application is structured as such item 10 can be considered as the folder]), the main body having side hinge arms (figure 4 item 26), and the folder having a center hinge arm with an opening and being positioned between the side hinge arms (figure 4 item 14 center hinge arm with an opening and being positioned between the side hinge arms), comprising: a hinge dummy (figure 4 item 26a) having a first end fixed to one of the side hinge arms and inserted within the center hinge arm (figure 4 item 26a going to item 26 through 14) with a second end of the hinge dummy facing the opening (figure 4 item 26a side facing towards the opening and camera of 14), for rotatable engagement with the center hinge arm (figure 4 items 26a and 14); a camera holder rotatably engaged with the second end of the hinge dummy (figures 4 items 32 and 26a); and a camera lens having an end fixed to the camera holder (figure 4 items 30 and 32), disposed in the opening (figure 4 item 30 i.e. camera is in the opening between item 14), and rotating with the camera holder about a hinge axis aligned with the first axis (Abstract and column 2 lines 14 *et seq.*), so that an angle of view is controlled (Abstract and column 2 lines 14 *et seq.*).

Regarding **claim 2**, as mentioned above in the discussion of claim 1, Kang teaches all of the limitations of the parent claim. Additionally, Kang teaches that the hinge dummy includes a sliding guide extending along a circumferential direction on an

inner circumferential surface of the hinge dummy (figures 6 and 7 item 42), and the camera holder includes at least one guide pin fixed to an outer circumferential surface of the camera holder, for sliding along the sliding guide as the camera holder rotates (figure 6 item 44 including elastic extrusion 44a).

Regarding **claim 4**, as mentioned above in the discussion of claim 2, Kang teaches all of the limitations of the parent claim. Additionally, Kang teaches that the guide pin is formed integrally with the camera holder (figure 6 item 44 including elastic extrusion 44a is formed on item items 30 and 32).

Regarding **claim 5**, as mentioned above in the discussion of claim 2, Kang teaches all of the limitations of the parent claim. Additionally, Kang teaches the guide pin is formed to retract in and extend from the outer circumferential surface of the camera holder by an elastic force (figure 6 item 44 including elastic extrusion 44a and column 5 lines 16 *et seq.*).

Regarding **claim 6**, as mentioned above in the discussion of claim 1, Kang teaches all of the limitations of the parent claim. Additionally, Kang teaches that the camera holder includes a fixing hole (figure 6 item 32 having a hole) that passes through both the first and second ends of the camera holder along the hinge axis (figure 6 item 32 having a hole) and the camera lens includes a fixing protrusion protruding

from an end of the camera lens, for being inserted into the fixing hole (it is inherent that the camera 30 will include a fixing protrusion for holding item 32).

Regarding **claim 7**, as mentioned above in the discussion of claim 6, Kang teaches all of the limitations of the parent claim. Additionally, Kang teaches that the camera lens further includes a through hole that passes through the fixing protrusion, so that a flexible printed circuit extended from the camera lens is drawn through the through hole (figure 5 and 6 items 52 and 54 also column 2 lines 27 – 36 and column 4 lines 11 - 48).

Regarding **claim 8**, as mentioned above in the discussion of claim 7, Kang teaches all of the limitations of the parent claim. Additionally, Kang teaches that the hinge dummy includes a passing hole formed along the hinge axis, through which the flexible printed circuit drawn from the camera lens is inserted into the side hinge arm (figure 5 and 6 items 52 and 54 also column 2 lines 27 – 36 and column 4 lines 11 - 48).

Regarding **claim 9**, as mentioned above in the discussion of claim 8, Kang teaches all of the limitations of the parent claim. Additionally, Kang teaches the hinge dummy further includes a guide hole through an outer circumferential surface of the hinge dummy along the circumferential direction, for communicating the passing hole with the outside of the hinge dummy and defining a path through which another flexible printed circuit drawn from the folder passes (figure 5 and 6 items 52 and 54 also column

2 lines 27 – 36 and column 4 liens 11 – 48; it is inherent that item 26a will include a guide hole formed in a circumferential direction for providing a path from the folder item 10 and the camera 30 to the main body 20).

Regarding 14, Kang teaches a camera lens unit in a portable wireless terminal (figure 4) including a main body (figure 4 item 20 [Note: even though in Kang item 10 is called the main body the examiner believes that the claim of the pending application is structured as such item 20 can be considered as the main body]) and a folder rotatable about a first axis with respect to the main body (figure 4 item 10 [Note: even though in Kang item 20 is called the folder the examiner believes that the claim of the pending application is structured as such item 10 can be considered as the folder]), the main body having side hinge arms (figure 4 item 26), and the folder having a center hinge arm with an opening and having first and second half portions on either side of the opening (figure 4 item 14 center hinge arm with an opening and being positioned between the side hinge arms), hinge-combined between the side hinge arms (figure 4 items 14 and 26), comprising: a hinge dummy (figure 4 item 26a) having a first end fixed to one of the side hinge arms and inserted within the first half portion of the center hinge arm (figure 4 item 26a going to item 26 through 14) and having a second end facing the opening (figure 4 item 26a side facing towards the opening and camera of 14), for rotatable engagement with the center hinge arm (figure 4 items 26a and 14); a camera holder rotatably engaged with the second end of the hinge dummy (figures 4 items 32 and 26a); and a camera lens having an end fixed to the camera holder (figure 4 items

Art Unit: 2622

30 and 32), disposed in the opening (figure 4 item 30 i.e. camera is in the opening between item 14), and rotating with the camera holder about a hinge axis aligned with the first axis (Abstract and column 2 lines 14 *et seq.*), so that an angle of view is controlled (Abstract and column 2 lines 14 *et seq.*), wherein the camera lens unit is supported by a hinge module installed at the second half portion of the center hinge arm (figure 4 item 26a), which has a hinge protrusion positioned within the center hinge arm (figure 4 item 26a), for rotatably combining the main body with the folder (figure 4 item 26a), and a support protrusion protruding from the opening (figure 4 item 32), for rotatably supporting the camera lens (figure 4).

Regarding **claim 15**, as mentioned above in the discussion of claim 14, Kang teaches all of the limitations of the parent claim. Additionally, Kang teaches the hinge dummy includes a guide hole formed in a circumferential direction, for communicating inside and outside the hinge dummy and providing a path in which a flexible printed circuit drawn from the folder passes (figure 5 and 6 items 52 and 54 also column 2 lines 27 – 36 and column 4 lines 11 – 48; it is inherent that item 26a will include a guide hole formed in a circumferential direction for providing a path from the folder item 10 and the camera 30 to the main body 20).

Regarding **claim 16**, as mentioned above in the discussion of claim 14, Kang teaches all of the limitations of the parent claim. Additionally, Kang teaches the hinge dummy further includes a sliding guide extending along a circumferential direction on an

inner circumferential surface of the hinge dummy (figure 5 and 6 items 52 and 54 also column 2 lines 27 – 36 and column 4 lines 11 – 48; it is inherent that item 26a will include a guide hole formed in an inner circumferential surface for providing a path from the folder item 10 and the camera 30 to the main body 20), and the camera holder includes at least one guide pin fixed on an outer circumferential surface of the camera holder (figure 6 item 44 including elastic extrusion 44a), for sliding in the sliding guide as the camera holder rotates (figures 6 and 7 item 42 and 44a).

Regarding **claim 18**, as mentioned above in the discussion of claim 14, Kang teaches all of the limitations of the parent claim. Additionally, Kang teaches the hinge dummy includes a fixing end protruding a predetermined length along the hinge axis from the first end of the hinge dummy and fixed to the side hinge arm (figure 4 item 26a), the fixing end including a fixing rib extending from the first end of the hinge dummy and a protrusion extending from the first end of the hinge dummy, and positioned near the fixing rib (figure 4 item 26a, it is inherent that item 26a will include a fixing rib extending from the first end of the hinge dummy and a protrusion extending from the first end of the hinge dummy, and positioned near the fixing rib for affixing to item 26).

Claims 1, 2, 14, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Park et al. (US PgPub 2003/0109232).

Regarding 1, Park et al. teaches a camera lens unit in a portable wireless terminal (figures 1 - 4) including a main body (figures 1 - 4 item 20 [Note: even though in Kang item 10 is called the body housing the examiner believes that the claim of the pending application is structured as such item 20 can be considered as the body housing]) and a folder rotatable about a first axis with respect to the main body (figures 1 - 4 item 10 [Note: even though in Kang item 20 is called the folder the examiner believes that the claim of the pending application is structured as such item 10 can be considered as the folder]), the main body having side hinge arms (figures 1 - 4 items 101, 102), and the folder having a center hinge arm with an opening and being positioned between the side hinge arms (figures 1 - 4 item 102 center hinge arm with an opening to the left and being positioned between the side hinge arms also item and 201), comprising: a hinge dummy (figure 3 item 330) having a first end fixed to one of the side hinge arms and inserted within the center hinge arm (figure 3 item 330 and 103) with a second end of the hinge dummy facing the opening (figure 3 item 330 and the opening to the right), for rotatable engagement with the center hinge arm (figure 3 item 330 and item 102); a camera holder rotatably engaged with the second end of the hinge dummy (figure 3 item 330 and 30 including the camera 310); and a camera lens having an end fixed to the camera holder (figure 3 item 30 including the camera 310), disposed in the opening (figure 3 item 30 including the camera 310 in the opening), and rotating with the camera holder about a hinge axis aligned with the first axis (figures 1 - 4 item 30 including the camera 310), so that an angle of view is controlled (figures 1 - 4 item 30 including the camera 310).

Regarding **claim 2**, as mentioned above in the discussion of claim 1, Park et al. teaches all of the limitations of the parent claim. Additionally, Park et al. teaches that the hinge dummy includes a sliding guide extending along a circumferential direction on an inner circumferential surface of the hinge dummy (figure 4 item 330 with sliding grove 336), and the camera holder includes at least one guide pin fixed to an outer circumferential surface of the camera holder, for sliding along the sliding guide as the camera holder rotates (figure 3 item 302).

Regarding **14**, Park et al. teaches a camera lens unit in a portable wireless terminal (figures 1 - 4) including a main body (figures 1 - 4 item 20 [Note: even though in Kang item 10 is called the body housing the examiner believes that the claim of the pending application is structured as such item 20 can be considered as the body housing]) and a folder rotatable about a first axis with respect to the main body (figures 1 - 4 item 10 [Note: even though in Kang item 20 is called the folder the examiner believes that the claim of the pending application is structured as such item 10 can be considered as the folder]), the main body having side hinge arms (figures 1 - 4 items 101, 102), and the folder having a center hinge arm with an opening and having first and second half portions on either side of the opening (figures 1 - 4 item 102 center hinge arm and half portion with an opening to the left and being positioned between the side hinge arms also item 201), hinge-combined between the side hinge arms (figures 1 - 4 item 102 center hinge arm and half portion with an opening to the left and being

positioned between the side hinge arms also item 201), comprising: a hinge dummy (figure 3 item 330) having a first end fixed to one of the side hinge arms and inserted within the first half portion of the center hinge arm (figure 3 item 330 and 103) and having a second end facing the opening (figure 3 item 330 and the opening to the right), for rotatable engagement with the center hinge arm (figure 3 item 330 and item 102); a camera holder rotatably engaged with the second end of the hinge dummy (figure 3 item 330 and 30 including the camera 310); and a camera lens having an end fixed to the camera holder (figure 3 item 30 including the camera 310), disposed in the opening (figure 3 item 30 including the camera 310 in the opening), and rotating with the camera holder about a hinge axis aligned with the first axis (figures 1 - 4 item 30 including the camera 310), so that an angle of view is controlled ((figures 1 - 4 item 30 including the camera 310), wherein the camera lens unit is supported by a hinge module installed at the second half portion of the center hinge arm (figure 3 item 340 and 343), which has a hinge protrusion positioned within the center hinge arm (figure 3 item 340 and 343), for rotatably combining the main body with the folder (figure 3 item 340 and 343), and a support protrusion protruding from the opening (figure 3 item 334a), for rotatably supporting the camera lens (figure 3 item 334a).

Regarding **claim 16**, as mentioned above in the discussion of claim 14, Park et al. teaches all of the limitations of the parent claim. Additionally, Park et al. teaches the hinge dummy further includes a sliding guide extending along a circumferential direction on an inner circumferential surface of the hinge dummy (figure 4 item 330 with sliding

groove 336), and the camera holder includes at least one guide pin fixed on an outer circumferential surface of the camera holder (figure 6 item 44 including elastic extrusion 44a), for sliding in the sliding guide as the camera holder rotates (figure 3 item 302).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang (US patent No 7,133,691) in further view of Hyon (US patent No 6,409,112).

Regarding **claims 3 and 17**, as mentioned above in the discussion of claim 2 and 16 respectively, Kang teaches all of the limitations of the parent claim.

However, Kang fails to disclose the hinge dummy further includes a plurality of grooves spaced equiangularly around the hinge axis on the inner circumferential surface of the hinge dummy between the sliding guide and the second end of the hinge dummy, and the camera holder further includes at least one contact pin formed on the outer circumferential surface of the camera holder, for providing a feeling of click by the extension and retraction, via a predetermined elastic force, of the at least one contact pin contacting the grooves as the camera holder rotates. Hyon, on the other hand discloses the plate 10 further includes a plurality of grooves spaced equiangularly around the hinge axis on the inner circumferential surface of the plate 10 and the pin

holder further includes at least one contact pin formed on the outer circumferential surface of the pin holder, for providing a feeling of click by the extension and retraction, via a predetermined friction force, of the at least one contact pin contacting the grooves as the pin holder rotates (column 2 lines 4 – 7 and lines 58 – 65 also column 4 lines 1 – 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Hyon with the teachings of Kang because in column 1 lines 49 – 57 Hyon teaches that doing so will help determine the state of rotation and more importantly no screwed portion is needed in turn increasing the productivity.

Claim 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang (US patent No 7,133,691) in further view of NAGAI et al. (EP 1383324 A1).

Regarding **claim 11**, as mentioned above in the discussion of claim 1, Kang teaches all of the limitations of the parent claim.

Additionally, Kang teaches that the center hinge arm includes two half portions on opposite sides of the opening (figure 4 item 14).

However, Kang fails to disclose the camera lens includes a support hole formed at another end of the camera lens, and a support protrusion is provided at the half portion on the side opposite from the hinge dummy, for being rotatably inserted into the support hole. NAGAI et al., on the other hand discloses the camera lens includes a support hole formed at another end of the camera lens, and a support protrusion is

provided at the half portion on the side opposite from the hinge dummy, for being rotatably inserted into the support hole.

More specifically, NAGAI et al. discloses the camera lens includes a support hole formed at another end of the camera lens (figures 3(A) and 4(A) item 20 has holes at the ends), and a support protrusion is provided at the half portion on the side opposite from the hinge dummy, for being rotatably inserted into the support hole (figures 3(A) and 4(A) has item 32 to be inserted into the holes at the end of item 20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of NAGAI et al. with the teachings of Kang because in paragraph 31 NAGAI et al. teaches that as the rotational position of a rotating camera is optically detected by an optical rotational position detection part, even if the number of rotations of an imaging part increases due to repeated shootings or shots from the front side to the rear side, there will take place substantially no reduction in detection accuracy resulting from wear or the like which would be caused in conventional rotational position detection parts. Also, such an optical rotational position detection part of the present invention can be easily realized or constructed by two simple components alone, i.e., a reflector and a reflective photosensor or a transparent plate and a transparent type photosensor. In addition, since each transparent or transmission area of a rotating member such as the reflector or the transparent plate arranged for integral rotation with the camera has a sufficient circumferential and radial area, reduction in the detection accuracy of an optical sensor such as the reflective photosensor or the transparent type photosensor, which detects

the rotational position of the rotating member, can be minimized even if there take place variations, positional shifts or the like in the component parts between the rotating member and the optical sensor. Further, the imaging part and the optical rotational position detection part can be formed into an integral imaging unit, thereby making it easy to assemble the entire device.

Regarding **claim 13**, as mentioned above in the discussion of claim 1, Kang teaches all of the limitations of the parent claim.

However, Kang fails to disclose an engaging hole formed at a predetermined position on a surface of the camera holder facing the camera lens; and an engaging rib protruding from the camera lens toward the camera holder, for insertion into the engaging hole, wherein positioning of the camera holder to the camera lens is determined by engagement of the engaging rib into the engaging hole. NAGAI et al., on the other hand discloses an engaging hole formed at a predetermined position on a surface of the camera holder facing the camera lens; and an engaging rib protruding from the camera lens toward the camera holder, for insertion into the engaging hole, wherein positioning of the camera holder to the camera lens is determined by engagement of the engaging rib into the engaging hole.

More specifically, NAGAI et al. discloses an engaging hole formed at a predetermined position on a surface of the camera holder facing the camera lens (Figures 4(A) and 4(B) hole formed at the edge of item 32 affixing to item 20); and an engaging rib protruding from the camera lens toward the camera holder, for insertion

into the engaging hole (Figures 4(A) and 4(B) rib formed at the edge of item 20 affixing to item 32), wherein positioning of the camera holder to the camera lens is determined by engagement of the engaging rib into the engaging hole.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of NAGAI et al. with the teachings of Kang because in paragraph 31 NAGAI et al. teaches that as the rotational position of a rotating camera is optically detected by an optical rotational position detection part, even if the number of rotations of an imaging part increases due to repeated shootings or shots from the front side to the rear side, there will take place substantially no reduction in detection accuracy resulting from wear or the like which would be caused in conventional rotational position detection parts. Also, such an optical rotational position detection part of the present invention can be easily realized or constructed by two simple components alone, i.e., a reflector and a reflective photosensor or a transparent plate and a transparent type photosensor. In addition, since each transparent or transmission area of a rotating member such as the reflector or the transparent plate arranged for integral rotation with the camera has a sufficient circumferential and radial area, reduction in the detection accuracy of an optical sensor such as the reflective photosensor or the transparent type photosensor, which detects the rotational position of the rotating member, can be minimized even if there take place variations, positional shifts or the like in the component parts between the rotating member and the optical sensor. Further, the imaging part and the optical rotational

position detection part can be formed into an integral imaging unit, thereby making it easy to assemble the entire device.

Allowable Subject Matter

Claims 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter for **claim 10**: The camera lens unit of claim 8, further comprising: a guide hole extending from a predetermined position around an outer circumferential surface of the hinge dummy, for communicating the passing hole with the outside of the hinge dummy and defining a path through which another flexible printed circuit drawn from the folder passes; a rotational guide extending from an end of the camera holder and inserted into the hinge dummy to be exposed from the hinge dummy through the guide hole; and a fixing pin fixed onto an outer circumferential surface of the hinge guide, for exerting a contacting force against a side wall of the guide hole so as to prevent the camera holder from slipping off from the hinge dummy is not discussed or suggested in any of the prior art that was searched.

The following is a statement of reasons for the indication of allowable subject matter for **claim 12**: The camera lens unit of claim 11, further comprising a hinge module inserted into the center hinge arm from the half portion of the center hinge arm, for providing a rotation force in an opened direction when the folder is at or above a

Art Unit: 2622

predetermined angle by a predetermined elastic force and providing a rotation force in a closed direction when the folder is at or below the predetermined angle, wherein the support protrusion is movably installed at an end of the hinge module by a predetermined elastic force to protrude through the other end of the opening is not discussed or suggested in any of the prior art that was searched.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Usman Khan
10/06/2007
Patent Examiner
Art Unit 2622



TUAN HO
PRIMARY EXAMINER